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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,932	03/30/2001	Dennis Boyd	26422/25020	8175

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EXAMINER

HO, THOMAS Y

ART UNIT	PAPER NUMBER
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3677

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,932

Applicant(s)

BOYD, DENNIS

Examiner

Thomas Y Ho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-24 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-24, 26-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 13-17, 21, 23-24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd USPN5107557 in view of Saltness USPN3251075.

As to claim 1, Boyd discloses:

- A first inflatable compartment 13 having a length and width, when inflated, sufficient to support a human body.
- Said compartment having a top, bottom, and sides.
- Said first compartment being composed of at least two layers of vinyl (col.1, ln.65; col.2, ln.50).
- One layer of vinyl forming the top of the compartment and the second forming the bottom.
- A second inflatable compartment 23 disposed on the top of the first inflatable compartment and secured thereto at least along a portion of the first inflatable compartment at a point spaced inwardly from the sides of said first inflatable compartment (fig.13).
- Said second compartment extending generally the length and width of the top of the first compartment.

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- Said second compartment being of a size, when inflated, sufficient to support a human body.
- Said second compartment being composed of at least two layers of vinyl (col.2, ln.60-62) distinct from the two layers of vinyl forming the first compartment.
- Said second compartment being inflatable to give the top of the air mattress a soft, pillow-like appearance and feel (col.3, ln.10-17).
- Said first compartment and said second compartment are secured together adjacent one another.

Boyd fails to disclose or suggest:

- Said compartments are secured together adjacent a fluid communication channel.
- The fluid communication channel providing fluid communication between the first and second inflatable compartments to enable fluid in one of the first and second inflatable compartments to flow into the other of the first and second inflatable compartments.

Saltness discloses first and second inflatable compartments having a fluid communication channel 41 formed between the compartments (col.2, ln.69-72; col.3, ln.1-5) providing fluid communication between the first and second inflatable compartments, to allow free passage of fluid between the upper and lower sections. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the compartments disclosed by Boyd to have a fluid communication channel, as taught by Saltness, to allow free passage of fluid between the upper and lower sections.

As to claim 3, Boyd discloses a mattress wherein:

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- The bottom layer of said second compartment 23 is secured to the top of the upper layer of the first compartment 13 (fig.13).

As to claim 4, Boyd fails to disclose or suggest the following limitations:

- The second compartment has a soft, non-vinyl fabric secured to the top thereof.

Saltness discloses first and second inflatable compartments, with both compartments covered by an expansible fabric covering (col.2, ln.10-15) for comfort, and to provide a covering that can expand with the article. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the compartment disclosed by Boyd to have a fabric covering, as taught by Saltness, to increase comfort.

As to claim 5, Saltness discloses the following not disclosed by Boyd:

- Said first and second compartments are in fluid communication with each other.

As to claim 13, Boyd discloses a mattress wherein:

- The first compartment 13 and the second compartment 23 are sealed together at a point recessed from the periphery of the first compartment 13, thereby permitting limited relative movement of the second compartment 23 with respect to the first compartment 13 along the edge of the mattress (fig.13).

As to claim 14, Boyd discloses a mattress wherein:

- The seal is recessed approximately one inch (fig.13).

As to claim 15, Boyd discloses a mattress wherein:

- The vinyl layers of the second compartment 23 are connected together by a first vinyl strip extending between the layers along the periphery of the second compartment 23.

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It is clearly shown that a vinyl strip acts as a connecting sidewall to the two layers that define the second compartment 23 (fig.1).

- The vinyl layers of the first compartment 13 are connected together by a second vinyl strip extending between the layers along the periphery of the first compartment 13.

As to claim 16, Saltness discloses the following not disclosed by Boyd:

- The only access to the interior of the first and second compartments for inflation of both compartments is through a single valve.

As to claim 17, Saltness discloses the following not disclosed by Boyd:

- The single valve is disposed in a wall of the first compartment.

As to claim 21, Boyd discloses a mattress wherein:

- The second compartment 23 has a single peripheral seam (fig.13).

As to claim 23, Boyd discloses a mattress wherein:

- The two layers of the second compartment 23 are secured together at a plurality of discontinuous positions (col.4, ln.43-47).

As to claim 24, Boyd discloses a mattress comprising:

- A first inflatable compartment 13 having sides with a length and a width and defining a periphery.
- A second inflatable compartment 23 extending generally the length and width of the periphery.
- A perimeter seal connecting said first inflatable compartment to said second inflatable compartment.
- Said perimeter seal is spaced inwardly from the periphery (fig.13).

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- At least one additional seal connecting said first inflatable compartment to said second inflatable compartment.

Saltness discloses the following not disclosed by Boyd:

- Said additional seal defining a fluid communication channel 41 providing fluid communication between the first and second inflatable compartments to enable fluid in one of the first and second inflatable compartments to flow into the other of the first and second inflatable compartments.

As to claim 26, Boyd discloses a mattress comprising:

- A first inflatable compartment 13 having sides with a length and a width and defining a periphery.
- A second inflatable compartment 23 extending generally the length and width of the periphery.
- Said second inflatable compartment comprising a pair of layers joined together by a plurality of discontinuous seals (col.4, ln.39-47).
- A perimeter seal connecting said first inflatable compartment to said second inflatable compartment.
- Said perimeter seal is spaced a distance from the periphery to give the air mattress a soft, pillow-like appearance and feel (col.3, ln.9-17) when said second inflatable compartment is inflated, and to permit limited relative movement of the second compartment with respect to the first compartment.
- At least one additional seal connecting said first inflatable compartment to said second inflatable compartment.

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Saltness discloses the following not disclosed by Boyd:

- Said additional seal defining a fluid communication channel providing fluid communication between the first and second inflatable compartments to enable fluid in one of the first and second inflatable compartments to flow into the other of the first and second inflatable compartments.

Claims 6-12, 22, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd USPN5107557 in view of Saltness USPN3251075, and further in view of Wolfe USPN5598593.

As to claim 6, Boyd fails to disclose or suggest:

- The vinyl layers composing the second compartment are secured together by a plurality of ribs extending between the top of the second compartment and the bottom of the second compartment.

Wolfe discloses an inflatable air bed having a second compartment 20 composed of two layers, with the layers secured together by a plurality of ribs 34 extending between the top and bottom surfaces (col.3, ln.45-62) to limit outward expansion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second compartment disclosed by Boyd to have ribs in the second compartment, as taught by Wolfe, to limit outward expansion.

As to claim 7, Wolfe discloses the following not disclosed by Boyd:

- The ribs 34 extend transversely across the second compartment 20.
- Said second compartment having channels for flow of air around or through the ribs.

As to claim 8, Wolfe discloses the following not disclosed by Boyd:

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- The first 12 and second 20 compartments are substantially free to move with respect to each other except at the periphery thereof.

Wolfe discloses an inflatable air bed wherein the first and second compartments (12, 20) are only attached at the periphery thereof (col.5, ln.5-10) so that each layer can be independently adjusted (col.1, ln.40-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first and second compartments disclosed by Boyd to have both compartments free to move with respect to one another, as taught by Wolfe, so each layer can be independently adjusted.

As to claim 9, Wolfe discloses the following not disclosed by Boyd:

- The first compartment 12 has ribs 30 extending between the layers of vinyl making up the first compartment.
- The second compartment 20 has ribs 34 extending between the layers of vinyl making up the second compartment.

Wolfe disclose an inflatable air bed having a first compartment 12 with ribs 30 extending between the top and bottom layers (col.3, ln.29-35), as well as a second compartment 20 composed of two layers, with the layers secured together by a plurality of ribs 34 extending between the top and bottom surfaces (col.3, ln.45-62) to limit outward expansion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the compartments disclosed by Boyd to have ribs, as taught by Wolfe, to limit outward expansion.

As to claim 10, Wolfe discloses the following not disclosed by Boyd:

- The ribs 30 of the first compartment 12 are substantially taller than the ribs 34 of the second compartment 20.

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As to claim 11, Wolfe discloses the following not disclosed by Boyd:

- The ribs 30 of the first compartment 12 are at least twenty-five percent taller than the ribs 34 of the second compartment 20.

As to claim 12, Wolfe discloses the following not disclosed by Boyd:

- The ribs 34 of the first and second compartments are composed of vinyl. Wolfe discloses an inflatable air bed wherein the ribs 30/34 of the first and second compartments 12/20 are composed of vinyl (col.4, ln.45-47).

As to claim 22, Wolfe discloses the following not disclosed by Boyd:

- The second compartment 20 has at least two seams.

Wolfe discloses an inflatable air bed having a second compartment 20 having at least two seams to provide vertical height between the top and bottom layers for the insertion of ribs 34 to limit outward expansion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the mattress disclosed by Boyd to have a second compartment with at least two seams, as taught by Wolfe, to make room for beams that limit outward expansion.

As to claim 27, Boyd discloses:

- A first inflatable compartment 13 having a top, a bottom, and sides.
- Said first compartment being composed of at least two layers of material.
- One layer of material forming the top of the first compartment and the second layer of material forming the bottom of the first compartment.
- A second inflatable compartment 23 having a top and a bottom.
- The second compartment being composed of at least two layers of material.

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- One layer forming the top of the second compartment.
- The second layer of material forming the bottom of the second compartment.
- The second compartment being positioned above the first compartment.
- A perimeter seal (fig.13) connecting the top of the first compartment to the bottom of the second compartment.
- The perimeter seal being spaced inwardly from the sides of the first compartment.

Saltness discloses the following not disclosed by Boyd:

- A fluid communication channel providing fluid communication between the first compartment and the second compartment to enable fluid in one of the first and second inflatable compartments to flow into the other of the first and second compartments.

Wolfe discloses the following not disclosed by Boyd:

- A plurality of ribs 30/34 extending between the top and bottom of one of the first 12 and second 20 compartments.

As to claim 28, Boyd discloses:

- Each seal portion 27A constitutes a single discontinuous seal.

As to claim 29, Boyd discloses:

- Each discontinuous seal is spaced from each of the other discontinuous seals (fig.13).

As to claim 30, Boyd discloses:

- A first inflatable compartment 13 having sides with a length and a width and defining a periphery.

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- A second inflatable compartment 23 extending generally the length and width of the periphery.
- The second inflatable compartment having a top and a bottom.
- A perimeter seal (Fig.13) connecting said first inflatable compartment to said second inflatable compartment.
- Said perimeter seal is spaced inwardly from the periphery.

Saltness discloses the following not disclosed by Boyd:

- A fluid communication channel 41 providing fluid communication between the first and second inflatable compartments to enable fluid in one of the first and second inflatable compartments to flow into the other of the first and second inflatable compartments.

For a detailed description of the combination rejection of Boyd in view of Saltness, refer to the rejection of claim 1 above.

Wolfe discloses the following not disclosed by Boyd:

- A plurality of ribs 34 extending between the top and bottom of the second compartment 20.

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd USPN5107557 in view of Saltness USPN3251075, and further in view of Chung USPN6332760.

As to claim 18, Boyd fails to disclose or suggest:

- A pump for inflating and/or deflating the first and second compartments.

Chung discloses a pump 14 for inflating and/or deflating an inflatable product without manual exertion of energy by the user. It would have been obvious to one of ordinary skill in the

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art at the time the invention was made to modify the mattress disclosed by Boyd to include a pump, as taught by Chung, to inflate the mattress using electricity rather than manually.

As to claim 19, Chung discloses the following not disclosed by Boyd:

- The pump is permanently attached to a valve disposed in a wall of the first or second compartment.

As to claim 20, Chung discloses the following not disclosed by Boyd:

- The pump is removably attachable to a valve disposed in a wall of the first or second compartment.

Response to Arguments

Applicant's arguments filed 4/14/03 have been fully considered but they are not persuasive.

Applicant presents arguments (pg.6-8) against the obviousness of the combination of Boyd USPN5107557 in view of Saltness USPN3251075.

Applicant argues that the inclusion of a fluid communication channel between the air cushion and the water bladder of Boyd557 would negate the benefits of Boyd557's mattress assembly. Applicant states that the suggested modification would allow water to flow from the water bladder into the air cushion, thus causing a user to suffer heat loss. This argument is not persuasive for several reasons. The combination of Boyd557 in view of Saltness would teach the addition of one or more fluid communication channels (41 in Saltness) between the first and second chambers of Boyd557. Applicant's argument is based on the assumption that the amount of water in the mattress assembly would be of an amount where the user would be in contact with the water through the top surface. However, the amount of water in the mattress of

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Boyd557 could easily be equal in volume to the space defined by the lower chamber, with only air floating on top of the water in the upper chamber of Boyd557. Therefore, the addition of the fluid channels of Saltness to the mattress of Boyd557 would not cause a user to suffer heat loss by conduction. Hypothetical situations regarding the type, amount, and temperature of a fluid used in the claimed mattress assembly hold no patentable weight, and are not persuasive arguments. Whether water or fluid is used is also moot because the structure of the mattress assembly holds patentable weight, not how it is used. The Boyd557 mattress could be filled with air instead of water in both chambers and still read on the claimed invention.

The location of the water is irrelevant, and the mattress structure is the only relevant topic. The mattress assembly of Boyd557 is used to reject the claimed invention, and the structure disclosed by the Boyd557 reference is not dependent on whether fluid is used or not. If applicant believes that the use of water in the mattress assembly in the Boyd reference is necessary in regards to the patentability of the invention, then applicant must also believe that another inventor could possibly receive another new patent on the Boyd557 mattress assembly if he/she claims the same structure, but in a deflated state. This is not true.

Whether fluid passes through the channel or not is moot because the structure is able to accomplish the function. By claiming that the fluid communication channel provides for, enables, or allows flow is functional language and holds no patentable weight. Claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Danly*, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA1959). “[A]pparatus claims cover what a device *is*, not what a device *does*.” *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528, (Fed. Cir. 1990).

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Finally, there are other motivations, aside from maintaining shape, to provide the passages 41 of Saltness in the mattress assembly of Boyd557, as stated in the rejections in the detailed action above. The whole diaphragm of Saltness need to be bodily incorporated into Boyd557, because Saltness can be used as a teaching only for a single fluid communication channel between two compartments. Boyd557 never clearly states that the chambers CANNOT be in fluid communication, and the reasons against the rejection that are presented by applicant are based on hypothetical situations involving the use of water, which is not a part of the claimed invention.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Y Ho whose telephone number is (703)305-4556. The examiner can normally be reached on M-F 10:00AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J Swann can be reached on (703)306-4115. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9326 for regular communications and (703)872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-1113.

TYH
June 13, 2003


J. J. SWANN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600